PUBLIC NOTICE

Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

News Media Information 202 / 418-0500
Internet: https://www.fcc.gov
TTY: 1-888-835-5322

DA 20-821
Released: July 31, 2020

WIRELESS TELECOMMUNICATIONS BUREAU AND OFFICE OF ENGINEERING AND TECHNOLOGY APPROVE SPECTRUM ACCESS SYSTEM ADMINISTRATOR KEY BRIDGE TO BEGIN INITIAL COMMERCIAL DEPLOYMENT IN THE 3.5 GHZ BAND

GN Docket No. 15-319

I. INTRODUCTION

1. With this *Public Notice*, the Wireless Telecommunications Bureau (WTB) and the Office of Engineering and Technology (OET) (collectively, WTB/OET) of the Federal Communications Commission (Commission or FCC) certify that the Spectrum Access System (SAS) operated by Key Bridge Wireless LLC (Key Bridge) has satisfied the Commission's SAS laboratory testing requirements[1] and is approved to begin its initial commercial deployment (Initial Commercial Deployment or ICD) as described in its ICD proposal and consistent with the obligations and conditions detailed in this Public Notice and contained in the ICD Proposals Public Notice.[2] WTB/OET, in consultation with the Department of Defense (DoD) and the National Telecommunications and Information Administration (NTIA), have reviewed both Key Bridge's SAS laboratory testing report and its ICD proposal.

II. BACKGROUND

2. In the *2015 Report and Order*, the Commission directed WTB/OET—in consultation with the DoD and NTIA—to oversee the review, certification, and approval of SASs in the 3.5 GHz band.[3] As required in the *2015 Report* and *Order*, and as further described in the *First Wave Proposal Public Notice*, all prospective SAS Administrators must complete a two-stage review process before

[1] Conditionally approved SAS Administrators were permitted to file their laboratory testing reports in GN Docket No. 15-319. *Wireless Telecommunications Bureau and Office of Engineering and Technology Establish Procedure and Deadline for Filing Spectrum Access System Initial Commercial Deployment Proposals*, Public Notice, 33 FCC Rcd 7390, 7392, para. 5 (WTB/OET 2018) (*ICD Proposals Public Notice*). Key Bridge chose to file its laboratory testing report with the Commission and requested confidential treatment. *See* Letter from Timothy L. Bransford, Counsel for Key Bridge, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 15-319 (filed June 24, 2020).

[2] Key Bridge's ICD proposal and a supplement were filed in GN Docket No. 15-319 consistent with the Commission's instructions. *ICD Proposals Public Notice*, 33 FCC Rcd at 7394-95, para. 11. Key Bridge requested confidential treatment for its ICD filings. *See* Letter from Jesse Caufield, CEO, Key Bridge, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 15-319 (filed Sep. 10, 2018) (ICD proposal); Letter from Timothy L. Bransford, Counsel for Key Bridge, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 15-319 (filed Feb. 28, 2020).

[3] *See generally Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, GN Docket No. 12-354, Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959, 4067, paras. 369-373 (2015) (*2015 Report and Order* and *2015 FNPRM*, respectively); *see also* 47 CFR §§ 0.241(j), 0.331(f).

receiving final certification.[4] In the first stage, a prospective SAS Administrator must submit a proposal describing how its system will comply with all Commission rules governing the construction, operation, and approval of SASs and perform all core functions described in the *2015 Report and Order*.[5] The second stage involves SAS testing both in a controlled lab environment and in a real-world setting.[6] On December 21, 2016, WTB/OET conditionally approved the first wave of SAS Administrators, including Key Bridge.[7]

3. As part of the second stage testing process, Key Bridge elected to collaborate with the Institute for Telecommunication Sciences (ITS), NTIA's research and development arm, in order to complete the laboratory testing requirement.[8] On July 22, 2019, ITS began testing Key Bridge's SAS. ITS completed its laboratory testing on May 15, 2020, and subsequently provided Key Bridge with a SAS laboratory test report, which Key Bridge submitted for the Commission's review on June 24, 2020.[9]

4. In order to comply with the field testing requirement, in July 2018, WTB/OET sought proposals for short-term, limited geographic commercial deployment from conditionally approved First Wave SAS administrators.[10] Consistent with the *ICD Proposals Public Notice*, Key Bridge timely filed its ICD proposal with the Commission and later supplemented its proposal.[11]

III. DISCUSSION

5. WTB/OET, in coordination with NTIA and DoD, are responsible for assessing and testing each conditionally approved SAS before final certification in both laboratory and real-world

[4] *See Wireless Telecommunications Bureau and Office of Engineering and Technology Establish Procedure and Deadline for Filing Spectrum Access System (SAS) Administrators(s) and Environmental Sensing Capability (ESC) Operator(s) Applications*, GN Docket No. 15-319, Public Notice, 30 FCC Rcd 14170, 14174-77 (WTB/OET 2015) (*First Wave Proposal Public Notice*).

[5] *See 2015 Report and Order*, 30 FCC Rcd at 4054-55, para. 320 (listing SAS core functions); *see also First Wave Proposal Public Notice*, 30 FCC Rcd 14170; *Wireless Telecommunications Bureau and Office of Engineering and Technology Conditionally Approve Seven Spectrum Access System Administrators for the 3.5 GHz Band,* Public Notice, 31 FCC Rcd 13355 (WTB/OET 2016) (*SAS Conditional Approval Public Notice*).

[6] *See 2015 Report and Order*, 30 FCC Rcd at 4067, para. 372 (noting that the final compliance testing phase can include a public testing period, testing of protections for incumbent systems, and field trials). On July 27, 2018, WTB/OET released a Public Notice that described the procedure and deadline for filing ICD proposals. *See ICD Proposals Public Notice*, 33 FCC Rcd 7390. ICD is meant to fulfill the Commission's requirement that applicants conduct a public testing period and field trials prior to final certification. *2015 Report and Order*, 30 FCC Rcd at 4067, para. 372.

[7] *SAS Conditional Approval Public Notice*, 31 FCC Rcd 13355 (conditionally approving the following seven SAS Administrators: Amdocs, Inc.; CommScope; CTIA; Federated; Google; iPosi; Key Bridge; and Sony). CTIA later withdrew its proposal. *See* Letter from Paul Anuszkiewicz et al., Vice President, Spectrum Planning, CTIA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 15-319 (filed Nov. 20, 2017).

[8] While lab testing of individual SASs is required before final certification, participation in either the process of verifying and validating the test harness or the subsequent lab testing of an individual SAS with ITS is optional and is not a prerequisite to submitting an ICD proposal or to obtaining final certification. *ICD Proposals Public Notice*, 33 FCC Rcd at 7392, para. 4.

[9] *See supra* note 1.

[10] *ICD Proposals Public Notice*, 33 FCC Rcd at 7390, para. 1.

[11] *See supra* note 2.

environments.[12] ICD will satisfy the real-world element of the testing process and will allow WTB/OET to assess whether an SAS can operate under actual deployment conditions.[13]

6. WTB/OET, in coordination with NTIA and DoD, reviewed Key Bridge's laboratory test report and ICD proposal in detail. Based on the information contained in those documents, we find that Key Bridge's laboratory test report satisfies the Commission's requirement to assess and test an SAS in a controlled lab environment and that Key Bridge's ICD proposal meets the requirements set forth in the *ICD Proposals Public Notice*. WTB/OET therefore approve Key Bridge's SAS for Initial Commercial Deployment, subject to the ongoing compliance obligations as follows:

- Key Bridge must file a notification in GN Docket No. 15-319 stating: (1) the beginning date of its ICD period; (2) the specific geographic areas covered by its ICD deployments; (3) whether its SAS is DPA-enabled;[14] (4) whether its SAS will be operating with an approved Environmental Sensing Capability (ESC)[15] operator during ICD and, if so, which ESC they will be using;[16] and (5) the expected end date of the ICD reporting period. The notification must also include a primary point of contact for incumbent operators to use to report potential interference issues to Key Bridge's SAS[17] and to obtain additional information about ICD operations, if needed. The ICD period may begin once this notification is filed.
- Initial Commercial Deployment must continue for a minimum of 30 consecutive days, consistent with the Key Bridge's ICD proposal, and Key Bridge must demonstrate compliance with the Commission's rules and other requirements set forth in the *ICD Proposals Public Notice*.[18] ICD must involve a variety of testing scenarios featuring multiple Citizen Broadband Radio Service Devices (CBSDs)[19] that result in the

[12] *See 2015 Report and Order*, 30 FCC Rcd at 4067, para. 372.

[13] *ICD Proposals Public Notice,* 33 FCC Rcd at 7392, para. 6.

[14] Dynamic Protection Areas (DPAs) are pre-defined protection areas that extend beyond the coastline or that enclose a protected terrestrial radar facility, which may be activated or deactivated as necessary to protect DoD radar systems. *Promoting Investment in the 3550-3700 MHz Band*, GN Docket No. 17-258, Order, 33 FCC Rcd 4987, 4990, para. 5 (WTB/OET 2018) (*DPA Waiver Order*). In the *DPA Waiver Order*, WTB and OET conditionally waived sections 96.7(a), 96.15(a)(2)-(3), 96.15(b)(2)-(3), 96.45(b), 96.53(g), and 96.57(d) of the Commission's rules to allow: (1) DPA-enabled SASs to authorize both Category A and Category B CBSDs in the 3.5 GHz band prior to ESC deployment and certification; and (2) DPA-enabled SASs to be certified without being tested for compliance with phase one Exclusion Zone requirements in areas where NTIA has published DPAs. On July 15, 2020, WTB and OET announced modified protection criteria for radar systems that operate in or near 11 naval port locations at or below the 3.5 GHz band. *Wireless Telecommunications Bureau and Office of Engineering and Technology Announce Modified Protection Criteria for Eleven Port Facilities Operating at or Below 3550 MHz*, GN Docket Nos. 17-258 and 15-319, Public Notice, DA 20-741 (WTB/OET 2020).

[15] ESCs will consist of a network of sensors—infrastructure-based, device-based, or a combination of both—that will detect federal radars operating in and around the 3.5 GHz band and relay information regarding those transmissions to the SAS in order to protect incumbent federal operations. See 47 CFR §§ 96.3, 96.15, 96.67.

[16] *See Wireless Telecommunications Bureau and Office of Engineering and Technology Announce the Approval and Registration of Environmental Sensing Capability Sensors of Three ESC Operators for the 3.5 GHz Band*, GN Docket No, 15-319, Public Notice, DA 19-718 (WTB/OET July 29, 2019); *DPA Waiver Order*, 33 FCC Rcd at 4993-94, para.16.

[17] *See* 47 CFR § 96.17(f).

[18] *See ICD Proposals Public Notice,* 33 FCC Rcd at 7392-94, paras. 7-8, 10.

[19] CBSDs are fixed stations, or networks of such stations, that operate on a Priority Access or General Authorized Access basis in the Citizens Broadband Radio Service. 47 CFR § 96.3.

generation of data upon which the Commission can reasonably predict that Key Bridge's SAS can reliably operate in compliance with the Commission's rules.[20]

- During ICD, Key Bridge must operate a SAS that is functionally consistent with the SAS tested in the laboratory environment. Key Bridge may implement software upgrades and patches to address any issues identified during ICD.
- Key Bridge must comply with all current and future Commission rules, instructions, and procedures.
- Key Bridge must comply with all instructions issued by WTB and OET pursuant to sections 0.241(j) and 0.331(f) of the Commission's rules.[21]
- Key Bridge must promptly respond to any Commission, WTB, Enforcement Bureau, or OET requests for additional information.
- During ICD, Key Bridge's conditionally approved SAS must promptly deactivate, or make changes in the operational parameters of any CBSD or group of CBSDs, if directed to do so by the Commission, WTB, OET or Enforcement Bureau. If, during ICD, Key Bridge's SAS is continually shown to cause interference to incumbents, WTB/OET may require Key Bridge to cease all operations until the underlying issues are resolved.

7. In addition, consistent with the *ICD Proposals Public Notice* and the individual ICD proposal submitted by Key Bridge, Key Bridge must comply with the following:

- Key Bridge must demonstrate that users can register with its SAS, receive authentication, and obtain user IDs during ICD.[22]
- Key Bridge must demonstrate how its SAS will communicate with and manage multiple CBSD or Domain Proxy (DP) products, including the protocols for SAS-CBSD communications for registration, channel grant, and channel release.[23] Key Bridge must identify all of its commercial partners that will operate during ICD.
- Key Bridge must demonstrate that a certified professional installer (CPI) can register CBSDs/DPs during ICD and must explain how that professional installation will ensure its SAS can accurately locate devices in compliance with Part 96.[24]
- Key Bridge must demonstrate that its SAS can access, read, and use data directly from FCC databases during ICD.[25]

[20] *ICD Proposals Public Notice*, 33 FCC Rcd at 7394, para. 10. These scenarios are included in Key Bridge's ICD proposal. *See supra* note 2.

[21] *See* 47 CFR §§ 0.241(j), 0.331(f).

[22] *See, e.g.,* 47 CFR §§ 96.25(c), 96.33, 96.39, 96.57.

[23] *See, e.g.*, 47 CFR §§ 96.39, 96.55-59. ICD will not need to cover all test cases performed in ITS lab testing.

[24] *See 3.5 GHz First Report & Order,* 30 FCC Rcd at 4028, para. 220 (stressing the importance of accurate CBSD geo-location for coordinating interactions between and among users in the band and for protecting Incumbent Users from harmful interference in compliance with Part 96). WinnForum has developed standards and a program to approve CPIs that successfully complete their training in the relevant Part 96 rules and the associated technical best practices, per the Commission's strong encouragement to multi-stakeholder groups and industry associations in the *3.5 GHz First Report & Order*. *See id.* at 4028-29, paras. 221-222.

[25] *See* 47 CFR § 96.55(d), 96.63.

- Key Bridge must demonstrate its ability to correctly synchronize and exchange information with other SASs and to correctly apply information security procedures and incumbent protection methods during ICD.[26]
- Key Bridge must demonstrate the processes that it will use to ensure the correct implementation of all relevant interference protection criteria, including how its SAS's over-the-air propagation testing addresses the protection of Fixed Satellite Service earth station sites, federal inland radar test sites, and area-based protections (e.g., Grandfathered Wireless Protection Zones).[27] Key Bridge should include the results of these protection tests in its ICD Report consistent with its approved final ICD deployment plan.
- If its SAS is DPA-enabled, Key Bridge must demonstrate the ability to implement notification-based DPA protection using a DPA portal.[28]
- Key Bridge must provide a method by which WTB, Enforcement Bureau, OET, NTIA, and the DoD will have access to its SAS and data generated by its SAS during ICD in order to verify that its SAS complies with the relevant rules. Key Bridge must also provide a primary point of contact to address questions about SAS operations or information from the Commission, NTIA, and the DoD.
- Key Bridge must demonstrate real-world application of interference reporting and timely interference mitigation processes, including providing FCC enforcement personnel with access to SAS data upon request.[29]
- Once Key Bridge completes its ICD, it must submit an ICD Report to the Commission, according to its approved proposal format and including a demonstration of compliance with each of these conditions.[30]

8. These conditions will ensure that Key Bridge will comply with the Commission's rules. Key Bridge will not receive final certification unless the conditions described in this *Public Notice* are met, and such certification may be revoked at any time if Key Bridge fails to comply with the Commission's rules and guidance on an ongoing basis.

IV. NEXT STEPS

9. We will carefully oversee Key Bridge's operations during the ICD period. WTB/OET, in coordination with NTIA and the DoD, will review Key Bridge's ICD Report and will publicly announce if Key Bridge successfully completes ICD and receives final certification to operate a SAS.

10. After Key Bridge submits its ICD Report to the Commission, it may continue Initial Commercial Deployment, subject to the conditions described in this *Public Notice*, during the review period and pending further Commission review. Key Bridge may expand operations seven business days after providing notice to the Commission, provided that such notice includes all information required by the *ICD Proposals Public Notice*. All ICD deployments must comply with all conditions listed in this *Public Notice* and contained in the *ICD Proposals Public Notice*.[31]

---

[26] *See* 47 CFR §§ 96.55(a)(2), 96.57, 96.59, 96.63(i).

[27] *See* 47 CFR §§ 96.15, 96.17, 96.21, 96.57, 96.59; https://www.ntia.doc.gov/fcc-filing/2015/ntia-letter-fcc-commercial-operations-3550-3650-mhz-band.

[28] *ICD Proposals Public Notice*, 33 FCC Rcd at 7393, para. 7.

[29] *See, e.g.,* 47 CFR §§ 96.53, 96.55.

[30] *ICD Proposals Public Notice*, 33 FCC Rcd at 7394, para. 10.

[31] *ICD Proposals Public Notice*, 33 FCC Rcd at 7392-94, paras. 7-10.

11. If Key Bridge successfully completes ICD and receives final certification to operate, it will be allowed to make its SAS available for commercial use for the five-year term specified in our rules.[32] We will publicly announce the availability of each SAS, at which time the five-year term will commence.

V. PROCEDURAL REQUIREMENTS

12. Key Bridge must file: (1) ICD Reports and any supplements; and (2) ICD notifications with the Commission using the Commission's Electronic Comment Filing System.[33] *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998). Key Bridge may request confidential treatment of information contained in its filings consistent with Section 0.459 of the Commission's rules.[34] All such filings should refer to **GN Docket 15-319**. Questions pertaining to ICD may be sent to ICD.Info@fcc.gov. Any information submitted to ICD.Info@fcc.gov will be considered public unless the filer requests confidential treatment of such information consistent with Section 0.459 of the Commission's rules.[35]

13. Questions regarding this *Public Notice* may be directed to Paul Powell, Assistant Division Chief, Wireless Telecommunications Bureau, Mobility Division at (202) 418-1613 or paul.powell@fcc.gov, or Navid Golshahi, Electronics Engineer, Office of Engineering and Technology, Policy and Rules Division at (202) 418-2422 or navid.golshahi@fcc.gov.

14. By the Chief, Wireless Telecommunications Bureau, and the Acting Chief, Office of Engineering and Technology.

-FCC-

[32] *See* 47 CFR § 96.63(e).

[33] While we will accept proposals electronically, we are not requesting public comment on the reports or notifications at this time.

[34] *See* 47 CFR § 0.459.

[35] *See id.*